

# Chapter Review

## USING KEY TERMS

1. In your own words, write a definition for each of the following terms:  
*superposition, geologic column, and geologic time scale.*

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For each pair of terms, explain how the meanings of the terms differ.

2. *uniformitarianism* and *catastrophism*

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3. *relative dating* and *absolute dating*

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4. *trace fossil* and *index fossil*

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## UNDERSTANDING KEY IDEAS

### Multiple Choice

- \_\_\_\_\_ 5. Which of the following does not describe catastrophic change?  
a. widespread  
b. sudden  
c. rare  
d. gradual
- \_\_\_\_\_ 6. Scientists assign relative ages by using  
a. absolute dating.  
b. the principle of superposition.  
c. radioactive half-lives.  
d. carbon-14 dating.



**Chapter Review** *continued*

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**15.** Explain how radioactive decay occurs.

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**16.** Describe two ways in which scientists use fossils to determine environmental change.

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**17.** Explain the role of paleontology in the study of Earth's history.

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**Chapter Review** *continued*

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**CRITICAL THINKING**

**18. Concept Mapping** Use the following terms to create a concept map: *age, half-life, absolute dating, radioactive decay, radiometric dating, relative dating, superposition, geologic column, and isotopes.*

**19. Applying Concepts** Identify how changes in environmental conditions can affect the survival of a species. Give two examples.

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**20. Identifying Relationships** Why do paleontologists know more about hard-bodied organisms than about soft-bodied organisms?

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**Chapter Review** *continued*

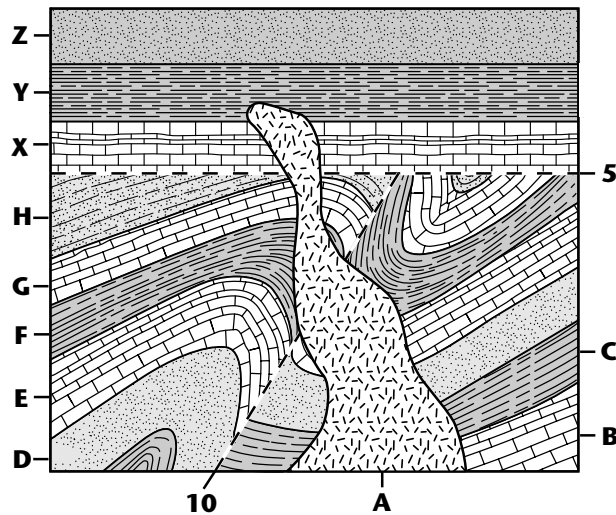
**21. Analyzing Processes** Why isn't a 100 million-year-old fossilized tree made of wood?

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**INTERPRETING GRAPHICS**

Use the diagram below to answer the questions that follow.



**22.** Is intrusion A younger or older than layer X? Explain.

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**23.** What feature is marked by 5?

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**24.** Is intrusion A younger or older than fault 10? Explain.

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**25.** Other than the intrusion and faulting, what event happened in layers B, C, D, E, F, G, and H? Number this event, the intrusion, and the faulting in the order that they happened.

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